

WHAT IS CLAIMED IS:

1. A state sensing apparatus for a movable body, the state sensing apparatus comprising:
 - 5 an image information collecting unit for collecting image information regarding a dashboard of a movable body; and an image recognition unit for analyzing the image information collected by the image information collecting unit and for sensing a state of the movable body.
 - 10 2. The state sensing apparatus for a movable body as claimed in claim 1, wherein the image information collecting unit is installed at a position a predetermined distance away from a front surface of the dashboard of the movable body.
 - 15 3. The state sensing apparatus for a movable body as claimed in claim 1, wherein the image information collecting unit is a miniature camera.
 4. The state sensing apparatus for a movable body as claimed in claim 1, wherein the image recognition unit analyzes the collected image information by means of image recognition.
 - 20 5. The state sensing apparatus for a movable body as claimed in claim 4, wherein the image recognition unit utilizes a feature-based image recognition in order to analyze image information regarding an analog dashboard.
 - 25 6. The state sensing apparatus for a movable body as claimed in claim 5, wherein the image recognition unit senses a speed of the movable body by analyzing information regarding a rotation angle by which a needle of an analog dashboard is rotated from a position representing a speed of zero.
 - 30 7. The state sensing apparatus for a movable body as claimed in claim 6, wherein the image recognition unit stores speed information in accordance with the rotation angle of the dashboard needle and senses the speed of the movable body

based on the stored information and the information regarding the rotation angle.

8. The state sensing apparatus for a movable body as claimed in claim 6,
wherein the image recognition unit stores maximum speed information of the
5 dashboard and a rotation angle of the dashboard needle when the speed is at a maximum,
and calculates the speed of the movable body by means of a ratio between a current
rotation angle of the needle and the rotation angle of the dashboard needle when the
speed is at a maximum.

10 9. The state sensing apparatus for a movable body as claimed in claim 4,
wherein the image recognition unit utilizes an appearance-based image
recognition in order to analyze image information regarding a digital dashboard.

10. A state sensing method for a movable body, the state sensing method
15 comprising the steps of:
collecting image information regarding a dashboard of a movable body; and
analyzing the collected image information and sensing a state of the movable
body.

20 11. The state sensing method for a movable body as claimed in claim 10,
wherein, in the collecting step, the image information regarding the dashboard
of the movable body is collected from a miniature camera installed at a position a
predetermined distance away from a front surface of the dashboard of the movable body.

25 12. The state sensing method for a movable body as claimed in claim 10,
wherein, in the analyzing step, the collected image information is analyzed
using image recognition.

30 13. The state sensing method for a movable body as claimed in claim 12,
wherein, in the analyzing step, a feature-based image recognition is utilized for
analyzing image information regarding an analog dashboard.

14. The state sensing method for a movable body as claimed in claim 13,
wherein the dashboard is an analog dashboard, and
wherein, in the analyzing step, a speed of the movable body is sensed by
analyzing information for a rotation angle by which a needle of the analog dashboard
5 has rotated from a position representing a speed of 'zero'.
15. The state sensing method for a movable body as claimed in claim 14,
wherein, in the analyzing step, speed information in accordance with the
rotation angle of the dashboard needle is stored in advance and the speed of the movable
10 body is sensed based on the stored information and the information for the rotation
angle.
16. The state sensing method for a movable body as claimed in claim 14,
wherein, in the analyzing step, maximum speed information of the dashboard
15 and a rotation angle of the dashboard needle when the speed is at a maximum are stored
and the speed of the movable body is calculated using a ratio between a current rotation
angle of the needle and the rotation angle of the dashboard needle when the speed is at a
maximum.
- 20 17. The state sensing method for a movable body as claimed in claim 12,
wherein, in the analyzing step, an appearance-based image recognition is
utilized for analyzing image information regarding a digital dashboard.